

REMARKS

Claims 1-11 and 13-21 are pending. Claims 1, 3, 4, 6, 8, 9, 17, and 18 have been amended. Claims 1-11 and 13-21 remain in the application. No new matter has been entered.

5 The drawings stand subject to objection under 37 CFR § 1.84(p)(4). FIGURE 1 has been amended per the Examiner's suggestion. A complete set of replacement drawings, consisting of three (3) sheets of drawings, are included with this response. No new matter has been added. Withdrawal of the objection is respectfully requested.

10 Claims 1-11 and 13-21 stand rejected under 35 U.S.C. § 112, first paragraph, for lack of enablement. Claims 1, 3, 4, 8, 9, and 17 have been amended. Withdrawal of the rejection of Claims 1-11 and 13-21 under 35 U.S.C. § 112, first paragraph, is respectfully requested.

15 Claims 1, 3-10 and 14-21 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,906,983, to Williams et al. ("Williams") in view of Atmel 8-bit AVR® Microcontroller With 1K Byte Flash: ATtiny11/ATtiny12 specification ("Atmel"). Applicant traverses the rejection.

20 *Prima facie* obviousness requires (1) some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the reference teachings; (2) a reasonable expectation of success; and (3) the combined references teaching or suggesting all the claim limitations. MPEP § 2143.

25 Williams and Atmel together disclose an earplug alarm that includes a base station, which can be implemented using software on a personal computer (Col. 5, lines 45-55). An earpiece interface supports connection of power and signals from the earpiece to the base station and a controller, such as Atmel ATtiny 12 microcontroller, handles all interface and control functions of the earpiece (Col. 5, line 66-Col. 6, line 7; Col. 9, lines 16-17). Non-volatile storage is provided by the microcontroller, which only includes a modest amount of
30 onboard program and data memory (Col. 9, lines 42-45; Atmel, pp.1, 8, 47-48).

The volume and tone of the alarm can be controlled and specific sounds, such as a pleasant chirp sound with a low repetition rate, can be produced via a “sounder,” which is a modified piezo-microphone (Col. 3, lines 12-22; Col. 6, lines 13-15; Col. 9, line 66; Col. 12, lines 1-3). Volume control and sound selection mechanisms can be added (Col. 12, lines 1-3). The alarm can be generated in a programmable processor to allow considerable flexibility in controlling volume, tone, or in producing specific sounds (Col. 3, lines 18-22). A base station connector is implemented as a stereo mini plug, which serves the purposes of the ear piece interface, disconnect and power, and signal separation (Col. 6, lines 15-20; Col. 8, line 66-Col. 9, line 11).

Turning to the factors for showing *prima facie* obviousness, first, the Williams-Amtel combination and the knowledge generally available to one of ordinary skill in the art fail to provide a suggestion or motivation to modify. The Williams-Amtel combination does suggest that specific sounds can be produced and that a sound selection mechanism can be added (Col. 3, line 20 and Col. 12, line 1). However, the Williams-Amtel combination fails to teach or suggest how such enhancements could, in fact, be provided.

Moreover, the Williams-Amtel combination appears to teach away from programming and providing downloadable programmable alarm tones for several reasons. First, the Williams-Amtel combination teaches that the base station is used for setting an alarm (Col. 5, lines 45-55 (“base station connector . . . [placed] into an ear-piece connector . . . to set the time, then removed”); and Col. 8, lines 6-14). Neither controls to select an alarm tone using the base station, nor a plurality of alarm tones programmable and downloadable from the base station are taught or suggested. Second, the non-volatile storage, which is a form of memory that maintains stored data without requiring a continual power source, stores settings received from the base station (Col. 6, lines 9-11). These settings include timer settings, which are the only type of data downloaded from the bases station that is taught by the Williams-Amtel combination (*Id.*; *cf.* Col. 7, lines 5-20 (“ear-piece data byte-1 . . . and ear-piece data byte-2 . . . not explicitly used”);

Col. 7, line 61-Col. 8, line 4 (“actual timing information to the ear-piece . . . contained in next 3 bytes”); Col. 8, lines 8-53 (“sequence . . . used whenever the user indicates a desire to set the attached ear-piece”); FIGURES 4 and 5). Storing downloaded alarm tones on the ear-piece is neither taught nor suggested. Finally,
5 the Williams-Amtel combination teaches that the ear-piece supports connection of power and signals from the ear-piece to the base station (Col. 5, line 66-Col. 6, line 14; *cf.* Col. 6, line 20-Col. 8, line 4 (“Data Transmission Protocols”)) and fails to teach or suggest using the ear-piece-to-base station connection for downloading programmable tones.

10 Second, for the sake of argument, were specific sound production and a sound selection mechanism successfully added the Williams-Amtel combination, a reasonable expectation of success would be likely, given that the Williams-Amtel combination can already produce a single alarm tone, which is produced via a “sounder.”

15 Nevertheless, the Williams-Amtel combination fails to teach or suggest retrieving or downloading at least one programmable alarm tone from a plurality of programmable alarm tones into a memory of an ear plug and generating the retrieved programmable alarm tone, per independent Claims 1, 8, 9, and 17.

 Specifically, Claim 1 has been amended to recite interface to receive the
20 user-settable time interval and the at least one programmable alarm tone from an external source *by which the at least one programmable alarm tone was programmed from a plurality of programmable alarm tones* and to store the user-settable time interval and the at least one programmable alarm tone into the memory (emphasis added). No new matter has been entered. Support for an
25 external source by which the at least one programmable alarm tone was programmed can be found in the specification on page 5, lines 11-10; page 6, lines 8-9 and 25-27; and page 7, lines 6-13. Support for a plurality of programmable alarm tones can be found in the specification on page 5, lines 11-13. Such limitations are neither taught nor suggested by the Williams-Amtel
30 combination.

Specifically, Claim 8 has been amended to recite means for receiving the user-settable time interval and the at least one programmable alarm tone from an external source *by which the at least one programmable alarm tone was programmed from a plurality of programmable alarm tones* and means for saving the user-settable time interval and the at least one programmable alarm tone into storing means (emphasis added). No new matter has been entered. Support for an external source by which the at least one programmable alarm tone was programmed can be found in the specification on page 5, lines 11-10; page 6, lines 8-9 and 25-27; and page 7, lines 6-13. Support for a plurality of programmable alarm tones can be found in the specification on page 5, lines 11-13. Such limitations are neither taught nor suggested by the Williams-Amtel combination.

Specifically, Claim 9 has been amended to recite *a programmer by which the at least one programmable alarm tone can be programmed from a plurality of programmable alarm tones*; and an external interface that is removably interfaced to the removable ear plug via the programming channel through the interface and the recharging interface to respectively receive the user-settable time interval and the at least one programmable alarm tone and the power to recharge to the rechargeable power cell (emphasis added). No new matter has been entered. Support for a programmer by which the at least one programmable alarm tone was programmed can be found in the specification on page 5, lines 11-10; page 6, lines 8-9 and 25-27; and page 7, lines 6-13. Support for a plurality of programmable alarm tones can be found in the specification on page 5, lines 11-13. Such limitations are neither taught nor suggested by the Williams-Amtel combination.

Specifically, Claim 17 has been amended to recite programming via the programming interface a user-settable time interval and specifying at least one programmable alarm tone *from a plurality of programmable alarm tones*; and downloading the user-settable time interval and the at least one programmable alarm tone *from the programming interface* into a memory provided within the

audible alarm circuit and maintained in the electronic ear plug (emphasis added). No new matter has been entered. Support for programming the programming interface . . . and specifying at least one programmable alarm tone can be found in the specification on page 5, lines 11-10; page 6, lines 8-9 and 25-27; and page 7, lines 6-13. Support for a plurality of programmable alarm tones can be found in the specification on page 5, lines 11-13. Such limitations are neither taught nor suggested by the Williams-Amtel combination.

Accordingly, *prima facie* of obviousness has not been shown for Claims 1, 8, 9, and 17. Claims 3-7 are dependent upon Claim 1 and are patentable for the above-stated reasons, and as further distinguished by the limitations therein. Claims 10-16 are dependent upon Claim 9 and are patentable for the above-stated reasons, and as further distinguished by the limitations therein. Claims 18-21 are dependent upon Claim 17 and are patentable for the above-stated reasons, and as further distinguished by the limitations therein. Withdrawal of the rejection of Claims 1, 3-10 and 14-21 under 35 U.S.C. §103(a) is respectfully requested.

Claim 2 stands rejected under 35 U.S.C. §103(a) as being obvious over Williams in view of Atmel and further in view of U.S. Patent No. 6,253,871, to Aceti. ("Aceti"). Applicant traverses the rejection.

Claim 2 is dependent on Claim 1 and is patentable for the above-stated reasons with reference to the rejection for obviousness, and as further distinguished by the limitations therein. Withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

Claim 11 stands rejected under 35 U.S.C. §103(a) as being obvious over Williams in view of Atmel and further in view of U.S. Patent No. 5,253,300, to Knapp ("Knapp"). Applicant traverses the rejection.

Claim 11 is dependent on Claim 9 and is patentable for the above-stated reasons with reference to the rejection for obviousness, and as further distinguished by the limitations therein. Withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

Claim 13 stands rejected under 35 U.S.C. §103(a) as being obvious over

Williams in view of Atmel and further in view of U.S. Patent No. 5,566,226, to Mizoguchi et al. ("Mizoguchi"). Applicant traverses the rejection.

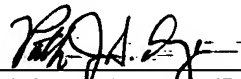
Claim 13 is dependent on Claim 9 and is patentable for the above-stated reasons with reference to the rejection for obviousness, and as further
5 distinguished by the limitations therein. Withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

The prior art made of record and not relied upon has been reviewed by the applicant and is considered to be no more pertinent than the prior art references already applied.

10 Claims 1-11 and 13-21 are believed to be in condition for allowance. Entry of the claim amendments and withdrawal of the finality of the Office action are respectfully requested. A Notice of Allowance is earnestly solicited. In the alternative, the mailing of an Advisory Action is required, pursuant to MPEP § 706.07(f). Please contact the undersigned at (206) 381-3900 regarding any
15 questions or concerns associated with the present matter.

Respectfully submitted,

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Final OA Resp

Fig. 1A.

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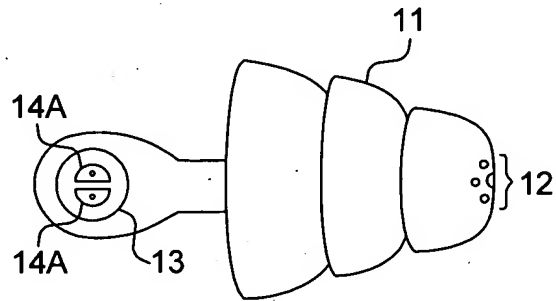


Fig. 1B.

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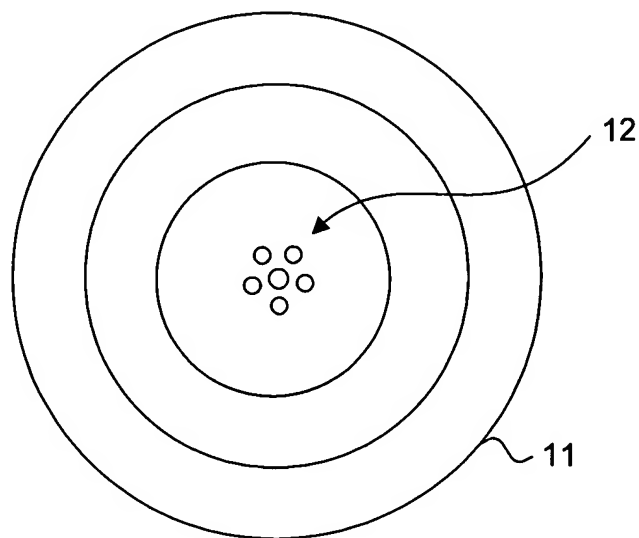


Fig. 2A.

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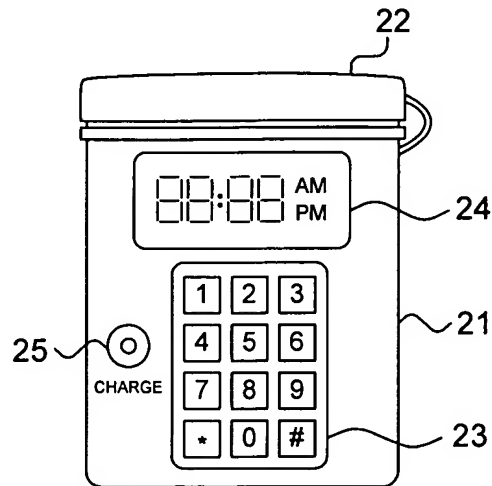


Fig. 2B.

30

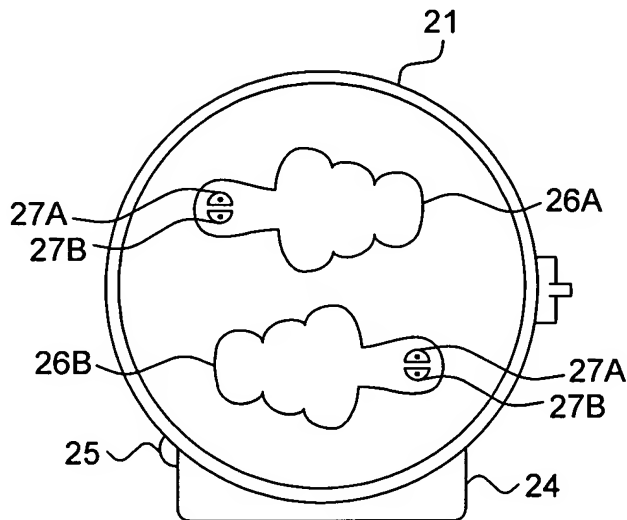


Fig. 3.

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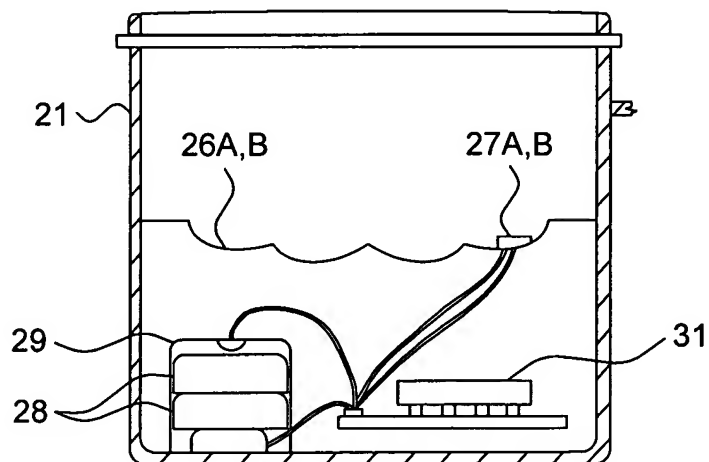


Fig. 4.

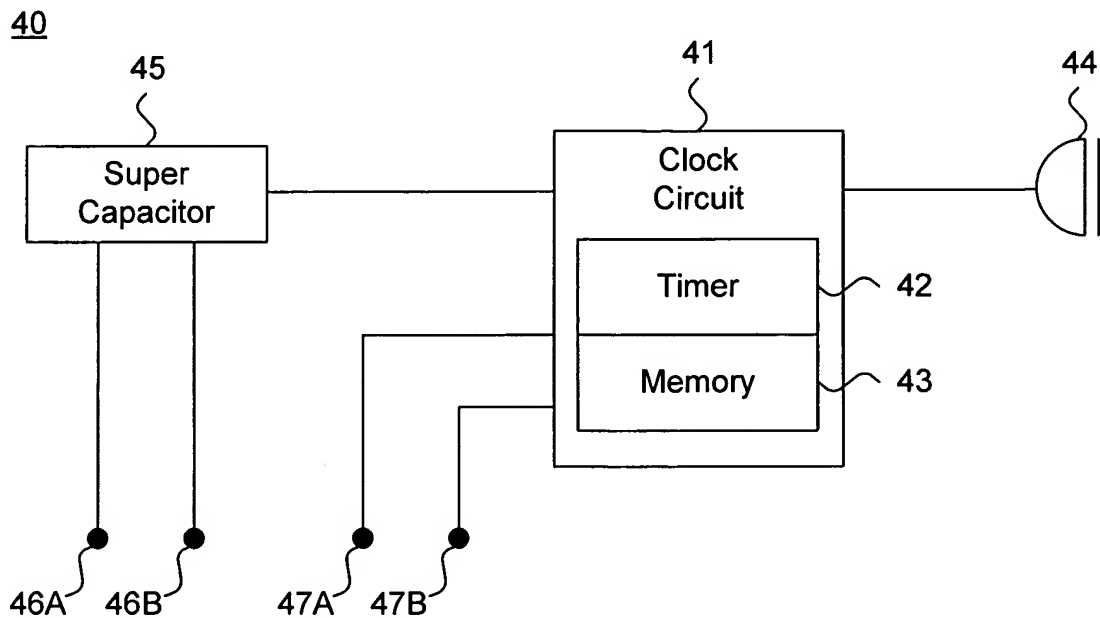


Fig. 5.

